Claims Listing:

The status of pending claims 1-18 is as follows.

1. (Previously Amended) A device for forming an image from a plurality of sub images, the device comprising:

a single-surface detector which includes a plurality of sensor elements for generating image data, said sensor elements arranged in groups for forming a plurality of sub-areas (T1 to TN) of the image, where each sub-image corresponds to each sub-area;

read-out units (V_1 to V_N) associated with the sub-areas (T_1 to T_N) of the image,

an analysis unit arranged to evaluate image data from adjoining image areas (S_{63} and S_{66}) of neighboring sub-areas (T_1 and T_2) and to generate correction data, and

a correction unit arranged to correct incorrect image data by means of the correction data.

2. (Previously Amended) The device as claimed in claim 1, wherein the sensor elements arranged in rows and columns forming a matrix.

3. (Previously Amended) The device as claimed in claim 2, wherein the rows or columns, or parts thereof, constitute an image area, that a plurality of image areas constitute a sub-area, and wherein amplifiers are included to read out image data from the sub-areas.

4. (Previously Amended) The device as claimed in claim 1, further comprising a memory for storing the correction data.

5. (Previously Amended) The device as claimed in claim 1, wherein the image data is applied to the analysis unit at a reduced rate.

6. (Previously Amended) The device as claimed in claim 3, wherein the analysis unit is arranged to receive image data from adjoining columns of neighboring amplifiers, and includes a histogram generator for generating histograms of the image data received, and

a summing unit for forming cumulative histograms from the histograms, and
an adaptation unit for forming a functional dependency between the amplification characteristics of the amplifiers of neighboring columns and for generating correction data.

7. (Previously Amended) The device as claimed in claim 6, wherein the histogram generator is arranged to receive the image data and to generate histograms over a selectable period of time.

8. (Previously Amended) The device as claimed in claim 1, wherein
the analysis unit further comprising means for forming an estimated value (SW_{65}) for the image value (GW_{65}) of a pixel (P_{65}) of a sub-area (T_2) to be corrected, the pixel (P_{65}) being situated at a boundary (G) with a neighboring sub-area (T_1), while utilizing an image value (GW_{64}) of the adjoining image area (S_{64}) of the neighboring sub-area (T_1), and
means for forming a correction value for the relevant image value (GW_{65}) in the sub-area (T_2) to be corrected by comparison of the actual image value SW_{65} of the pixel (P_{65}) with the estimated value (SW_{65}).

9. (Previously Amended) The device as claimed in claim 8, wherein
the analysis unit further comprises means for extrapolating across the boundary (G) the image values (GW_{63}, GW_{64}) of pixels (P_{63}, P_{64}) of an image area (S_{63}, S_{64}) of the neighboring sub-area (T1), adjoining the pixel (P_{65}) of the sub-area (T_2) to be corrected.

10. (Previously Amended) A method of forming an image using image data acquired from a plurality of sub-areas (T_1 to T_N) of a flat dynamic x-ray detector, wherein a read-out unit (V_1 to V_N) is associated with each sub-area, and wherein the image data from adjoining image areas (S_{63} and S_{66}) of neighboring sub-areas (T_1 and T_2) is evaluated in order to mitigate differences between amplifier characteristics.

11. (Previously Amended) The method as claimed in claim 10, further including determining an estimated value (SW_{65}) for an image value (GW_{65}) of a pixel (P_{65}) of a sub-area (T_2) to be corrected, the pixel (P_{65}) located at a boundary (G) with a neighboring sub-area (T_1), said estimating

carried out utilizing the image value (GW_{64}) of a pixel (P_{64}) of the adjoining image area (S_{64}) of the neighboring sub-area (T_1), and determining a correction value for the relevant image value (GW_{65}) in the sub-area (T_2) to be corrected by comparison of the actual image value (GW_{65}) of the pixel (P_{65}) and the estimated value (SW_{65}).

12. (Previously Amended) The method as claimed in claim 10, further including using a directly adjacent pixel of the neighboring sub-area as the estimated value of the image value.

13. (Previously Amended) The method as claimed in claim 10, further including extrapolating the image values (GW_{63}, GW_{64}) of pixels (P_{63}, P_{64}) of the adjoining image area (S_{63}, S_{64}) of the neighboring sub-area (T_1), across the boundary (G) in order to determine the estimated value (SW_{65}).

14. (Previously Amended) The method as claimed in claim 10, further including forming a first correction value for the image value (GW_{65}) of a pixel (P_{65}) of the sub-area (T_2) to be corrected, and determining an estimated value (SW_{64}) for the neighboring pixel (P_{65}) for a neighboring pixel (GW_{64}) of the neighboring sub-area (T1), directly adjoining this pixel (P_{65}) of the sub-area (T_2) to be corrected, the forming and determining utilizing image values (GW_{65}, GW_{66}) of the sub-area (T_2) to be corrected, forming a second correction value by comparison of the estimated value (GW_{64}) and the actual image value (GW_{64}) of the neighboring pixel (P_{64}), and forming a common correction value for the relevant image value (GW_{65}) of the sub-area (T_2) to be corrected from the first and the second correction value.

15. (Previously Amended) The method as claimed in claim 10, further including forming a common correction value for the relevant image value in the sub-area to be corrected from the correction values for the same image values of different pixels of the sub-area to be corrected.

16. (Previously Amended) The method as claimed in claim 10, further including storing the correction values for the image values of the individual sub-areas (T_1 to T_N) in an adaptation table (LUT) and are fetched from this table (LUT) for correction.

17. (Previously Amended) An X-ray examination apparatus which includes an X-ray source for emitting X-rays and for forming an X-ray image, a flat dynamic X-ray detector for forming an optical image from the X-ray image, which detector includes sensor elements arranged in rows and columns and at least two amplifiers (V_1 to V_N) for reading out detected image data, at least one amplifier being associated with each of a plurality of sub-areas (T_1 to T_N) in order to read out detected image data, comprising

an analysis unit for forming correction data on the basis of the evaluation of image data from adjoining image areas (S_{64} and S_{65}) of neighboring sub-areas (T_1 and T_2), and

a correction unit for correcting the incorrect image data by means of the correction data.

18. (Previously Amended) A computer program for the correction of image data derived from a single-surface detector comprising a plurality of sub-areas (T_1 to T_N), wherein a respective read-out unit (V_1 to V_N) is associated with sub-areas (T_1 to T_N) of the image and image data from image areas (S_{64} and S_{65}) of adjoining sub-areas (T_1 and T_2) of neighboring read-out units (V_1 and V_2) is evaluated by formation of histograms in order to generate correction data after integration of the histograms, which correction data is used to adapt the image data from one sub-area (T_2) to the amplifier characteristic of the read-out unit (V_1) which amplifies the adjoining sub-area (T_1).